

REMARKS

I. Summary of Claim Amendments

Claims 1, 2 and 5-14 are pending in the present application.

Claim 1 is amended to recited that the peak for particle size distribution of large particles is greater than the peak for particle size distribution of smaller particles, with support in the specification, for example, at Figs. 3-8.

No new matter is added. Accordingly, Applicants respectfully request entry and consideration of the Amendment.

II. Response to Claim Rejections Under 35 U.S.C. § 103(a)

(i) Claims 1, 2, 5, 8 and 12-13 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hwang et al. (WO 99/37592; hereafter Hwang I) in view of Goodwin (U.S. Patent No. 3,331,671) and Chiang (U.S. Patent No. 4,560,712).

(ii) Claims 5-7 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hwang I in view of Goodwin, Chiang, Chang (U.S. Patent No. 5,505,766) and Nomura et al. (machine translated JP 2001-220193).

(iii) Claim 11 is rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hwang I in view of Goodwin, Chiang and Nodera et al (U.S. Patent No. 5,837,757).

(iv) Claims 9-10 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hwang I in view of Goodwin, Chiang and Hwang (U.S. Patent No. 5,047,145; hereafter Hwang II).

Applicants respectfully traverse, at least for the following reasons.

Present claim 1 recites a flame-retardant resin composition comprising a polycarbonate type resin and fly ash which contains particles composed of a complex of silicon dioxide and aluminum oxide and has a 50% particle size (D50) of 1 to 10 μm and has two peaks in its particle size distribution, wherein the peak corresponding to the particle size distribution of large particles is greater than the peak corresponding to the particle size distribution of smaller particles.

The rejection of claim 1, and dependent claims thereof, based on Hwang I was addressed in the Amendment under 37 C.F.R. § 1.116, filed June 17, 2009. None of Goodwin, Chang, Nomura and Nodera cured the deficiency in Hwang I, with respect to the bimodal particle size distribution, as presently claimed.

In the present Office Action, the Examiner relies on Chiang to cure the above deficiency in Hwang I.

Chiang teaches a bimodal particle size distribution for calcium carbonate, used as a filler in polypropylene compositions. The Examiner's position is that it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the bimodal particle size distribution as taught by Chiang for the fly ash filler of Hwang, in order to obtain improved qualities such as rigidity, impact resistance and melt viscosity of the final resin product.

Applicants respectfully disagree with the Examiner's position.

First, the presently claimed invention uses polycarbonate resin. A polycarbonate resin, which has carbonate bond between monomeric units of the polymer, differs from the polypropylene resin of Chiang, which is a polymer made of propyl repeating units.

Second, the filler of the presently claimed invention is fly ash which contains particles composed of a complex of silicon dioxide and aluminum oxide. The complex of silicon dioxide and aluminum oxide is not equivalent to calcium carbonate.

Third, Chiang teaches a bimodal particle distribution for calcium carbonate particles, where the distribution of the large particle peak is less than the distribution of the small particle peak. See, for example, column 1, lines 37-56 of Chiang.

Although Chiang may teach a bimodal particle size distribution for calcium carbonate that may effect the characteristics of the polypropylene resin composition of Chiang, based on the non-equivalence of the complex of silicon dioxide and aluminum oxide and calcium carbonate, a person of ordinary skill in the art would not expect that a bimodal particle size distribution of a complex of silicon dioxide and aluminum oxide would have the same effect on the polycarbonate resin composition of the present application. Accordingly, Chiang does not cure the deficiency in Hwang I with regard to the particle size distribution of the complex of silicon dioxide and aluminum oxide of the presently claimed flame-retardant resin composition.

Therefore, claim 1 is patentable over Hwang I. None of Goodwin, Chang, Nomura, Nodera and Chiang cures the above deficiency in Hwang I. Claims 2 and 4-14 are also patentable, at least by virtue of their dependence from claim 1. In view of the above, Applicants

respectfully request reconsideration and withdrawal of all of the § 103(a) rejections of claims 1, 2 and 4-14.

Conclusion

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/590,237

Attorney Docket No.: Q96620

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: December 22, 2009